

ARLINGTON RESERVOIR MASTER PLAN



PUBLIC MEETING # 3 November 30, 2017

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DESIGN STUDIO

ARLINGTON RESERVOIR MASTER PLAN

MEETING AGENDA



- 1. Recap of First Public Meeting**
- 2. Project Phases + Timeline**
- 3. Environmental Findings**
- 4. Pump Building + Equipment Assessment**
- 5. Public Feedback Update**
- 6. Concept Plans + Precedent Imagery**
- 7. Preliminary Cost Estimates + Priority Assessment**
- 8. Upcoming Tasks + Process**

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RECAP OF FIRST PUBLIC MEETING



WHAT WE HEARD

- Environmental improvements for flora and fauna habitats
- Circulation enhancements
- Water access considerations (canoe, kayak and water chestnut harvester)
- Create opportunities for programmable space
- Improve swimming water quality
- Better, more accessible play experience
- Parking lot improvements

KEY OPPORTUNITIES

- The Res is already an awesome place!
- A few targeted moves will have a significant, positive impact
- Environmental improvements will greatly improve a large open space and infrastructural asset of the town

KEY CONSTRAINTS

- Environmental sensitivity and permitting implications
- Deteriorating state of critical (operational) existing infrastructure and equipment
- The Res is already an awesome place!

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PROJECT PHASES + TIMELINE

Project Phases

Timeline

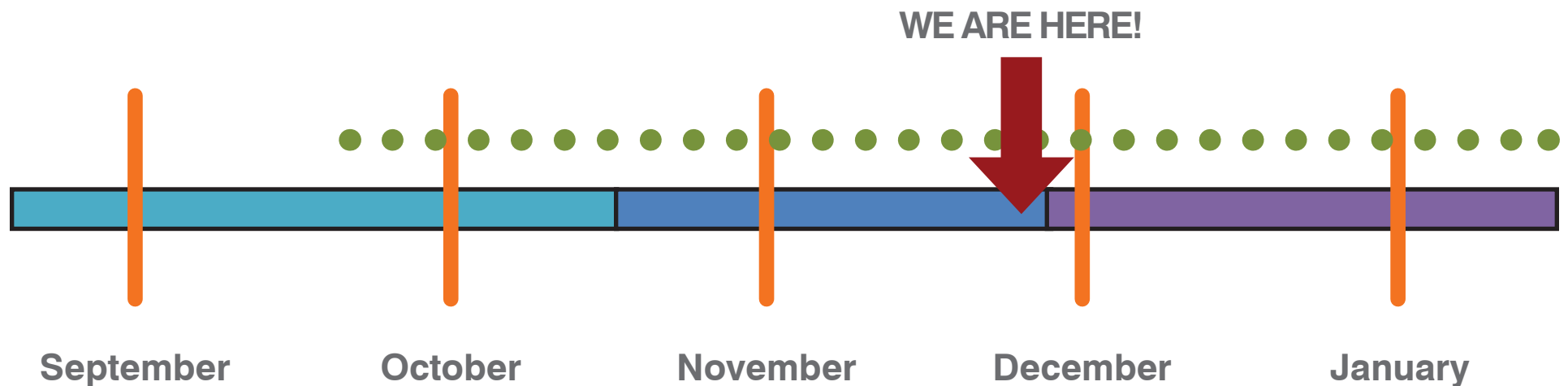
-  Site Analysis + Environmental Information Gathering
-  ● ● ● Public Participation + Input
-  Conceptual Design + Environmental Assessment
-  Preferred Plan + Environmental Recommendations

Summer / Fall

Project Duration

Fall / Winter

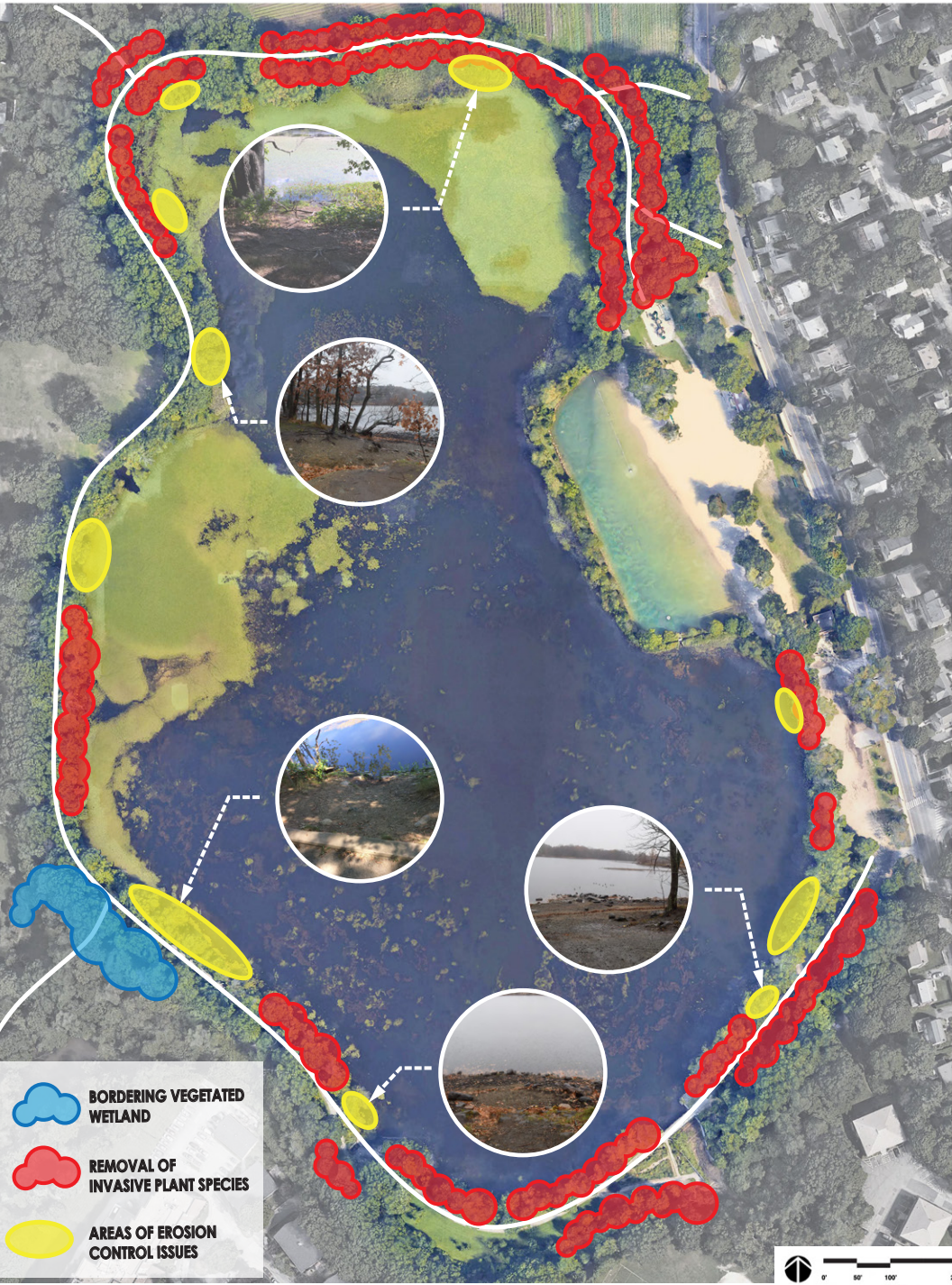
Winter



** December 8th - CPA Application Deadline*

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ENVIRONMENTAL FINDINGS - MAPPING



BORDERING VEGETATED WETLANDS

Vitis riparia,
riverbank grape

Symplocarpus foetidus,
skunk cabbage

Onoclea sensibilis,
sensitive fern

Lythrum salicaria,
purple loosestrife

Acer rubrum,
red maple

Robinia pseudoacacia,
black locust

Rhus typhina,
staghorn sumac

INVASIVE SPECIES

Polygonum cuspidatum,
japanese knotweed

Celastrus orbiculatus,
asian bittersweet

Berberis thunbergii,
japanese barberry

Rosa multiflora,
muliflora rose

Euonymus alatus,
Winged euonymus

Lythrum salicaria,
Purple loosestrife

Lonicera morrowii,
morrow honeysuckle

Frangula alnus,
glossy buckthorn

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ENVIRONMENTAL FINDINGS - WATER QUALITY

WATER QUALITY ASSESSMENT

- Depressed **oxygen** levels
 - Likely due to decaying matter
- Elevated **conductivity** values
 - Indicative of salt inputs from maintenance
- Moderate to high **turbidity** (suspended solids)
 - Reduces water clarity
- Neutral **pH** value
- Moderate **chlorophyll** values

PLANKTON ASSESSMENT

- Phytoplankton suggest green algae is most abundant
- Cyanobacteria are uncommon
- Algae does not represent a threat to human health or ecological integrity
- Zooplankton were generally scarce

PLANT ASSESSMENT

- Dominated by three species
 - **Water chestnut (invasive)**
 - Eurasian watermilfoil (invasive)
 - Coontail
- Other species present
 - Spiny naiad (invasive)
 - Curly leaf pondweed (invasive)
 - Spiral pondweed
 - Burreed
 - Aquatic clover
 - Filamentous green algae
 - Cattail

AQUATIC FAUNA + RELATED HABITAT

- Largemouth bass and bluegill sunfish observed
- Reduced vegetation density would improve the fishery
- Painted turtles observed and snapping turtles are likely present
- Spring is better time to check for amphibians
- Normal complement of invertebrate species observed
- Abundant bird life reported
 - Swans, mallard ducks, canadian geese, blue heron observed

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PUMP BUILDING + EQUIPMENT ASSESSMENT



RECOMMENDED IMPROVEMENTS

WATER FILTRATION + CLARITY

- New filtration system needed
- Renovate suction system and collector tank system
- New chemical feed system needed
- Introduce of UV treatment
- New inlet delivery system needed
- Skimming system needed

BUILDING

- Renovate interior
- New mechanical, electrical + plumbing
- Waterproofing + caulk repair

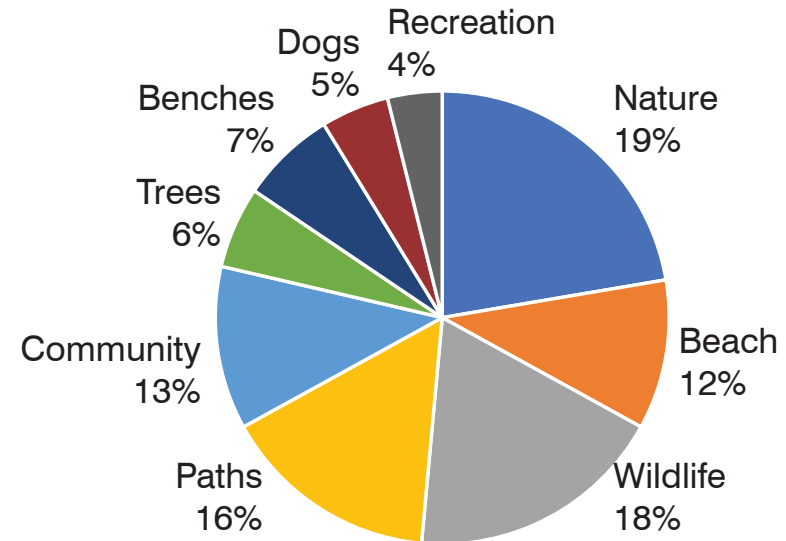


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PUBLIC FEEDBACK UPDATE

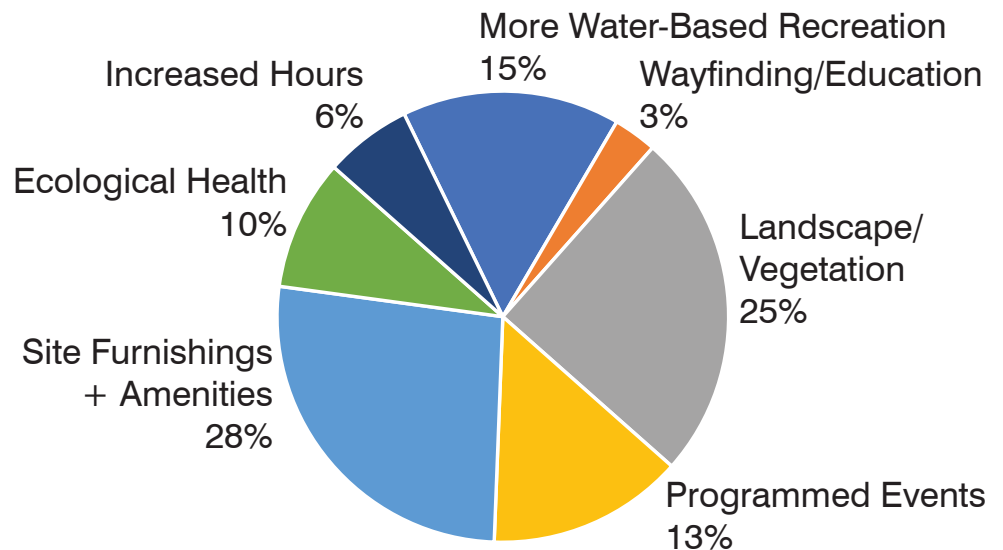
BEST THINGS ABOUT THE RES

- Swimming!
- Habitat garden, wildlife and trails.
- The willow trees.
- Shade and grass on the beach.
- Nature trail near Busa Farm.
- The loop trail.
- The shady beach!
- Fall/Winter walks with the dog.
- The beach is very affordable.



IMPROVEMENTS NEEDED

- More tables for lunch.
- Bigger/deeper swim area.
- Better maintenance of trails.
- Splash pad!
- Cleaner swimming water
- More walking/trail options.
- More programmable space (concerts, movies)
- Swimming lessons.
- Better water access.
- Food truck location.

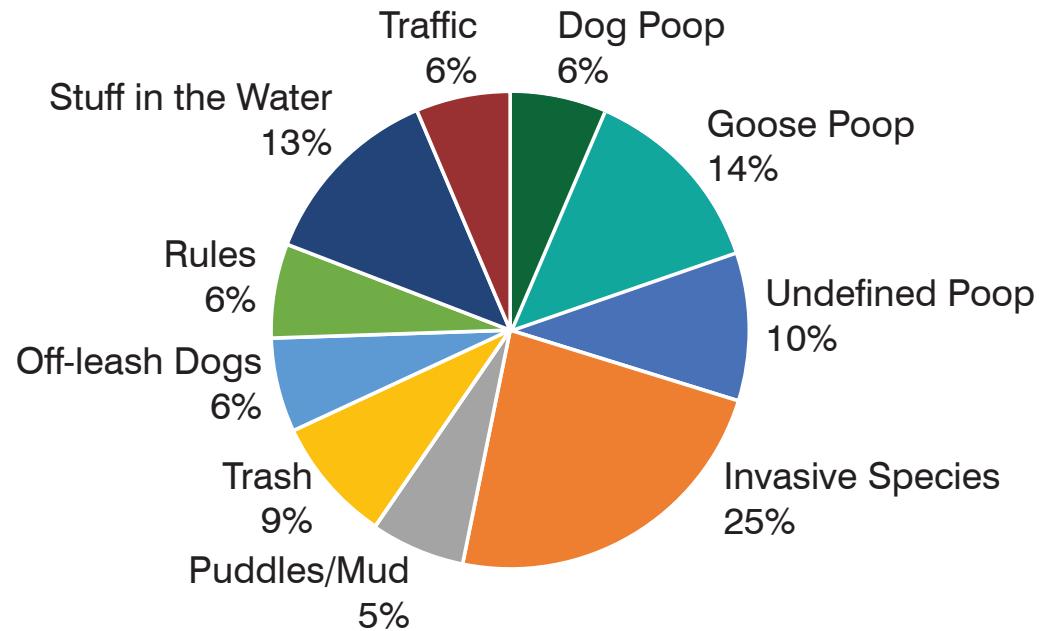


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PUBLIC FEEDBACK UPDATE (cont'd)

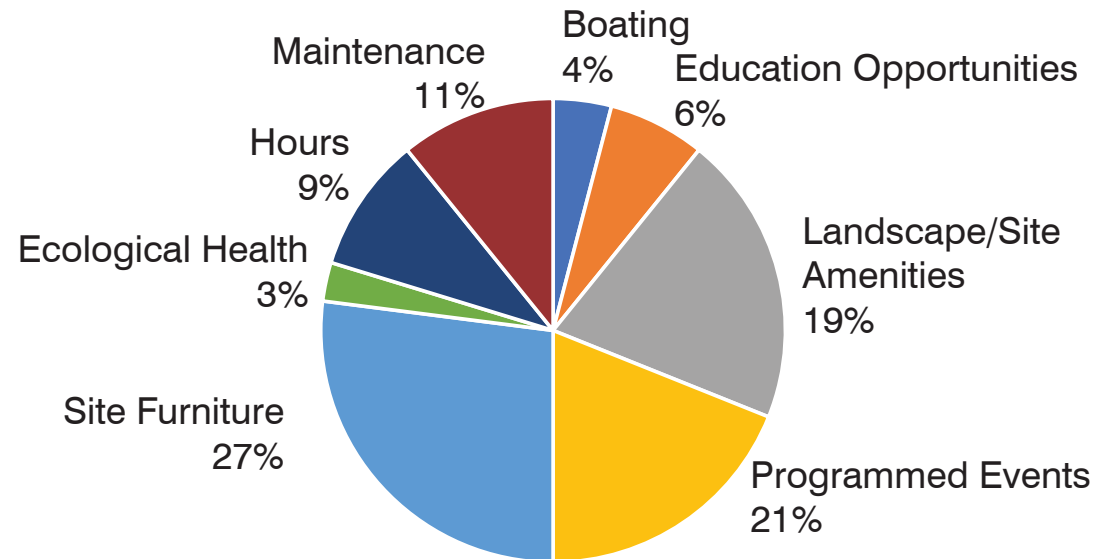
I WISH THE RES HAD LESS...

- Invasive plants.
- Debris floating in the water.
- Fencing along Lowell Street.
- Geese!
- Sediment in the swimming water.
- Erosion.
- Dog poop.
- Snow plowing! (cross country ski)
- Scum on bottom of swim area.



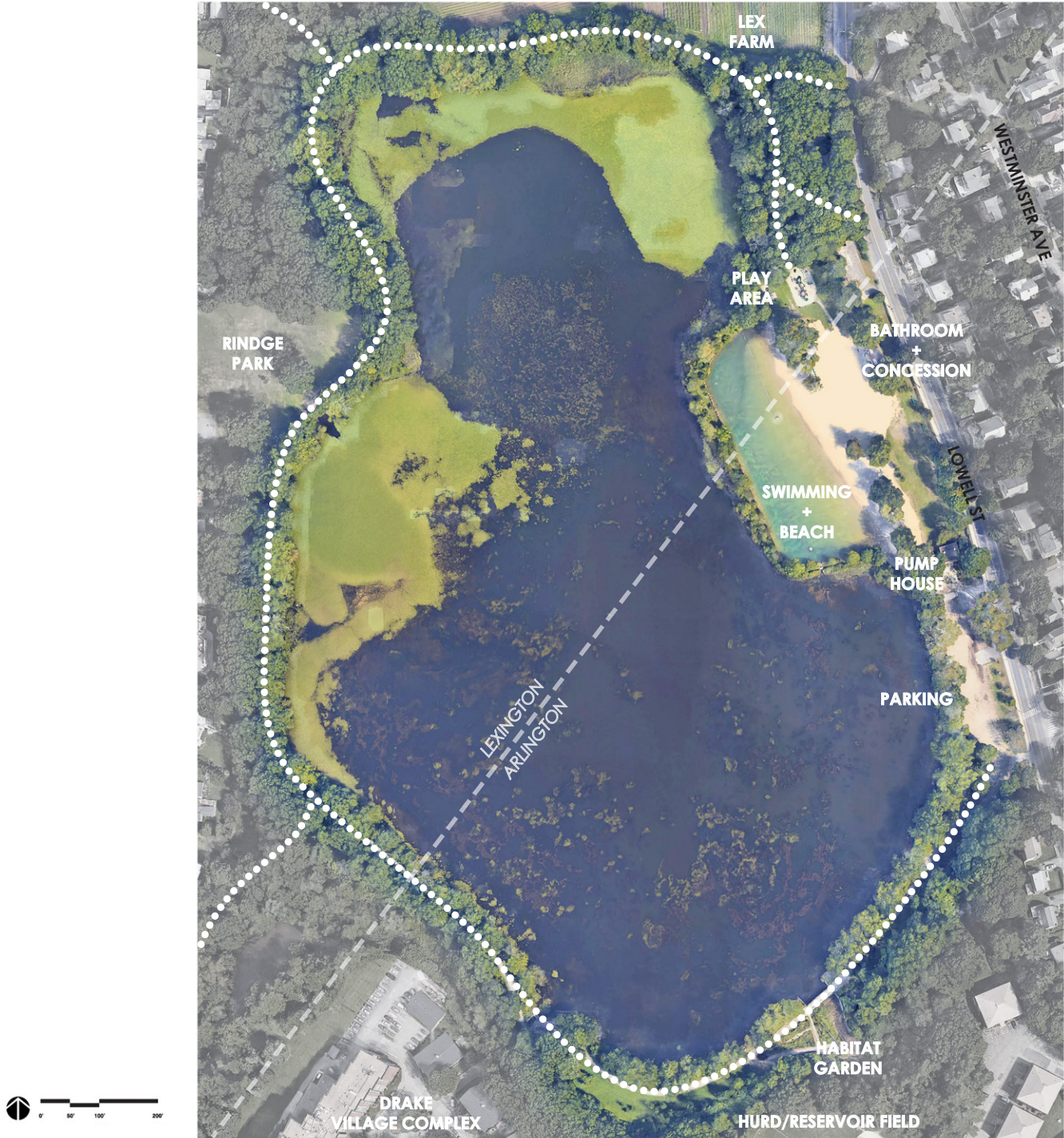
I WISH THE RES HAD MORE...

- Seating.
- Available beach hours in summer.
- Information on wildlife.
- Viewing opportunities.
- Public art.
- Year round access.
- Trash cans.
- Landscaped vegetation.



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EXISTING AERIAL - FULL RESERVOIR



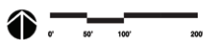
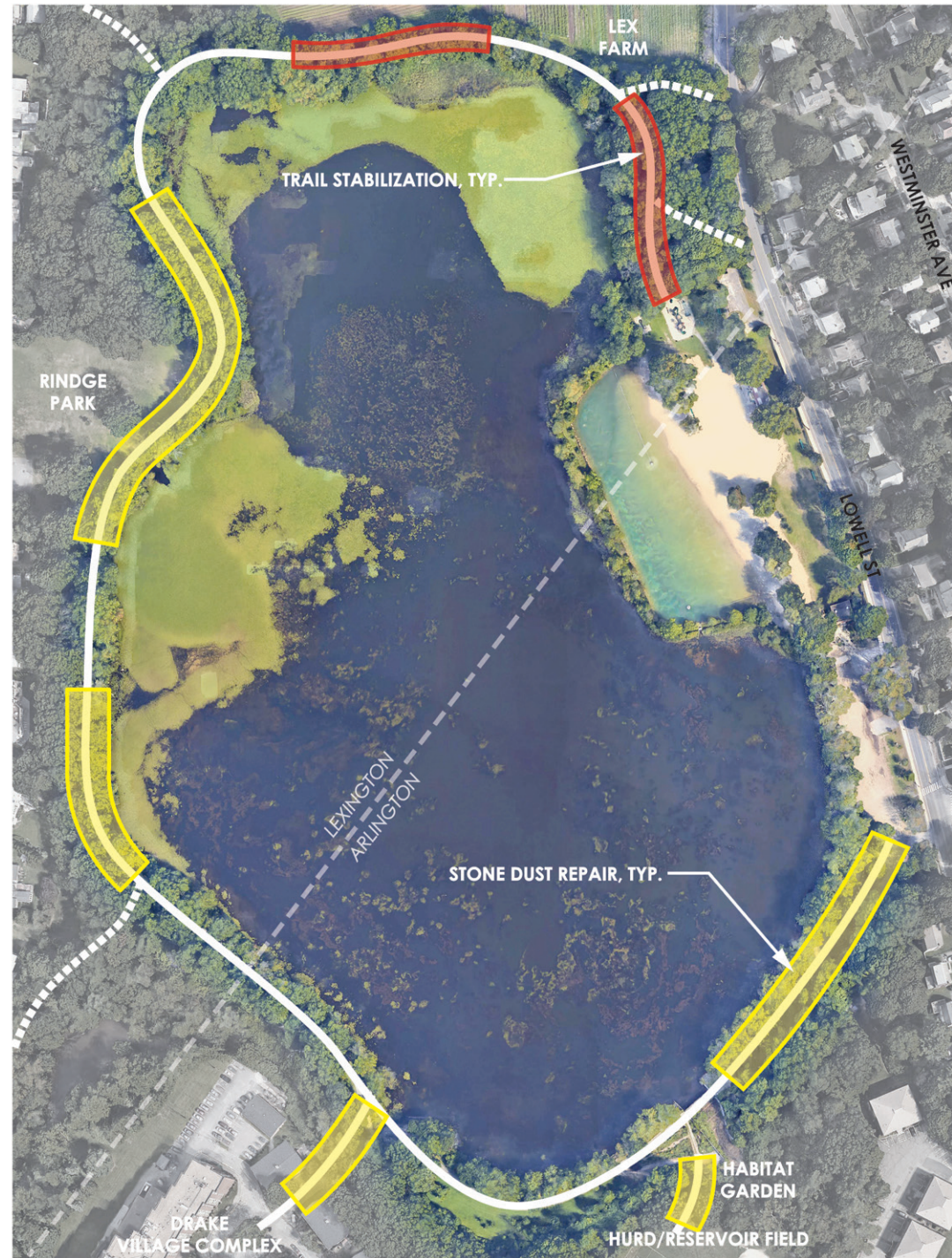
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EXISTING CONDITIONS - PERIMETER



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BASIC IMPROVEMENTS PLAN TO PERIMETER



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EXISTING CONDITIONS - BATHING BEACH + PARKING AREA



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EXISTING CONDITIONS - BATHING BEACH + PARKING AREA



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BASIC IMPROVEMENTS PLAN TO BATHING BEACH + PARKING LOT



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CONCEPT PLAN A



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CONCEPT PLAN B



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PRECEDENT IMAGERY



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UPCOMING TASKS + PROCESS



1. Develop a Draft Preferred Master Plan w/ cost and implementation phasing
2. Finalize and submit CPA application related to First Phase Improvements
3. Develop a Final Preferred Master Plan w/ cost and implementation phasing
4. Present Final Preferred Master Plan w/ cost and implementation phasing at
Public Meeting #4
5. Master Plan Report

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THANK YOU!



THOUGHTS

QUESTIONS

COMMENTS